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Gilles Gallou

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Robert D. Shedd, Patent Operations
THOMSON Licensing LLC
P.O. Box 5312
Princeton, NJ 08543-5312

EXAMINER

SHIN, KYUNG H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,533	Applicant(s) GALLOU ET AL.	
	Examiner Kyung Hye Shin	Art Unit 2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. This action is responding to amendments filed on 7-23-09. Claims 1 -14 are pending. Claims 1, 2, 4, 5, 7 - 14 have been amended. Claims 15, 16 have been cancelled. Claims 1, 9 are independent. This application file date is 10-17-2005.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive.

2.1 The specification objection has been withdrawn due to claim amendments.

2.2 The 101 rejection with reference to claims 15, 16 has been withdrawn due to amendments.

2.3 Applicant argues that the referenced prior art does not disclose for claims 1 and 9, *"triggering periodic transmission of said normal state signals, to said server, via said second network, through said sending means"*. (Remarks Page 7, 8, 10)

Applicant has stressed the transmission of state information from a client (device) to a server. The state information transferred can be used to indicate normal operation of the device. Chen discloses the transfer of state information from a client agent (device) to a server. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark) The transferred command(s) indicate the current state of the client. A pause command indicates a transition to a congested state from a normal state. A normal command indicates a transition to a normal state from a congested state. The information transferred between the client (device) and server

Art Unit: 2443

can be construed as state information. Forecast further discloses the transfer of state information between network-connected systems on a periodic basis (based on time).

In addition, Forecast discloses the transmission of state information from streaming servers to a master controller server. The destination for the state information is a server as stated in the claimed invention. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues; col 50, ll 13-16: controller servers and multiple stream servers)

2.4 Applicant argues that the referenced prior art does not disclose, *"said receiving means to receive special warning messages from said server via said first network when said server has not received said normal state signals in due time"*. (Remarks Page 9)

Forecast discloses as indicated in claims 10, 12, 14, a time period (due time) for the receipt of a state signal from a network-connected system. And, Forecast checks whether a threshold has been exceeded based on the time period. If the threshold has been exceeded, a message is sent. (Forecast col 52, ll 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 55, l 64 - col 56, l 8: controller

Art Unit: 2443

send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state)

In addition, Chen discloses the client server transmission of state information and Forecast discloses the periodic transmission of state information.

2.5 Applicant argues *the dependent claims*. (Remarks Page 9, 10)

The successful responses to arguments for independent claims 1, also successfully respond to current arguments against dependent claims 2 - 6.

The successful responses to arguments for independent claims 9, also successfully respond to current arguments against dependent claims 11, 12, 13.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims **1 - 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al.** (US Patent No. **5,822,524**) in view of **Forecast et al.** (US Patent No. **6,230,200**).

Regarding Claim 1, Chen discloses data requesting device through at least one first communication network from at least one data server, comprising:

- a) sending means for sending requests of determined data to the server via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control

Art Unit: 2443

channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks); specification (page 3) defines communications network as bi-directional communications network)

- b) receiving means for receiving streamed data from said server via said first communication network and for providing said data to processing means for them to be exploited, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application) and
- c) control means for producing pause control signals, for pausing data streaming from said server, and for triggering the sending of said pause control signals to said server via said second network through said sending means, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)
- d) for generating normal state signals, for said server for indicating a normal operation at said data requesting device, to said server via said second network; (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Art Unit: 2443

Chen does not explicitly disclose triggering periodic transmission of said state signals.

However, Forecast discloses wherein maintenance means by triggering periodic transmission of said normal state signals to the server through said sending means. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering periodic transmission of said state signals as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Regarding Claim 2, Chen discloses data requesting device according to claim 1, wherein said control means to produces also resume control signals, for resuming data streaming from said server after pausing, and said sending means to transmit to said server via said second network said resume control signals. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

Regarding Claim 3, Chen discloses data requesting device according to claim 1, wherein said data requesting device comprises a user interface (Chen col 1, ll 43-48: interactive access; user operates his client machine to request multimedia files from the server; col 4, l 65 - col 5, l 8: user types his commands on client machine; client machine has three interacting processes: client agent which interfaces network interface and multimedia application), enabling a user to trigger said control means and said sending means, so as to cause said control signals to be provided to said server via said second network. (Chen col 5, ll 36-40: uses two logical connections; control channel serves to exchange control messages)

Regarding Claim 4, Chen discloses data requesting device according to claim 1, wherein said received data being stored in a central memory before being exploited (Chen col 5, ll 56-59: output processor delivers data to multimedia application; packet buffer stores data packets until multimedia application requests delivery), said data requesting device comprises regulation means, for triggering said control means (to produce a pause control signal when said data in said central memory exceed a predetermined high threshold level of said central memory. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase (exceeds) above high water mark)

Regarding Claim 5, Chen discloses data requesting device according to claim 4,

Art Unit: 2443

wherein said regulation means triggers said control means to produce a resume control signal when said streaming has been paused by said regulation means and said data in said central memory decrease down to a predetermined low threshold level of said central memory. (Chen col 6, ll 49-51: client agent sends RESUME command decrease from above to below high water mark (threshold level))

Regarding Claim 6, Chen discloses data requesting device according to claim 4, wherein at least one of said threshold levels of said central memory depends on a round-trip time between said data requesting device and said server. (Chen col 4, ll 4-17: constant number of frames are played in a second; uses timing information to ensure transmission of a video frame in a frame time; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission; if data in buffer if client agent is below a selected standard watermark, threshold), the transmission rate is increased; if above selected standard it is decreased)

Regarding Claim 7, Chen discloses data requesting device according to claim 1, wherein: said receiving means receives a special warning messages from said server via said first network when said server has not received said normal state signals in due time, and said maintenance means triggers the sending of a normal state signal to said server via said second network as soon as said special warning message is received. (Chen col 6, ll 1-6: buffer manager manages the structure of data in packet buffer;

Art Unit: 2443

should have enough data to minimize possibility of not having request data and have enough free space to receive new packets)

Regarding Claim 8, Chen discloses a decoder, comprising a data requesting device according to claim 1. (Chen col 4, l 65 - col 5, l 8: PC (requesting device); user wishes to retrieve multimedia files from a server via data connections over a computer network; col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client)

Regarding Claim 9, Chen discloses data requesting process through at least one first communication network from at least one data server, comprising the following steps:

- a) sending requests of determined data to the at least one server via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))
- b) receiving streamed data from said at least one server via said first communication network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia

Art Unit: 2443

application; data channel (first) and control channel (second) communications channels (networks)) and

- c) producing and sending to said server via said second network, pause control signals, for pausing data streaming from said server, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)
- d) generating and transmitting to said server via said second network, normal state signals, for said at least one server for normal operation at said data requesting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose generating and periodically transmitting state signals for normal operation.

However, Forecast discloses wherein generating and periodically transmitting state signals, indicating a normal operation. (Forecast col 52, ll 37-46: stream server sends the heartbeat (periodically transmitting); heartbeat includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing (normal operation), completed), and a failure type code indicating any failure; col 52, ll 52-58: if there has not been a failure to receive stream server heartbeat (periodic transmission); then execution continues)

Art Unit: 2443

It would have been obvious to one of ordinary skill in the art to modify Chen for generating and periodically transmitting state signals for normal operation as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Regarding Claim 10, Chen discloses data transmitting device via at least one first communication network comprising:

- a) receiving means for receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks)) and
- b) streaming means for triggering streaming of said data to said data requesting device via said first network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer; output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks))

Art Unit: 2443

- c) said receiving means receiving from said data requesting device pause control messages, said streaming means pausing said data streaming when said pause control messages are received, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark) and
- d) said receiving means receives periodically normal state signals from said data requesting device (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow), and
- e) said data requesting device comprises means intended to trigger said normal state signals, said data transmitting device being provided for a data requesting device according to any of claim 1. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow)

Chen does not explicitly disclose an alarm means intended for triggering an alarm state when said state signals are not received in due time. However, Forecast discloses wherein alarm means intended to trigger an alarm state when said state signals are not received in due time. (Forecast col 52, ll 37-46: controller to receive a heartbeat from each stream server within a certain time period (must be received in due time); stream server sends the heartbeat (periodic transmission); heartbeat

Art Unit: 2443

includes: an indication of current position in the stream, the state of the stream (e.g. pause, playing, completed), and a failure type code (alarm) indicating any failure; col 52, ll 52-58: if there has not been a failure; then execution continues; if there has been a failure then log the error and initiate stream server recovery (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for alarm means intended to trigger an alarm state when said state signals are not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Regarding Claim 11, Chen discloses data transmitting device according to claim 10, wherein said normal state signal is received and depending on a round-trip time between said data requesting device and said data transmitting device. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high watermark; resume normal data flow; col 4, ll 33-44: times the transmission of multimedia files according to a fixed rate; frame rate during normal transmission;)

Chen does not explicitly disclose an alarm means to trigger said alarm state when any of said state signals is not received after a duration following an expected periodic time for receiving said state signal and said duration. However, Forecast discloses wherein alarm means are intended to trigger said alarm state when any of said state signal is not

Art Unit: 2443

received after a safety duration following an expected periodic time for receiving said state signal and said safety duration. (Forecast col 52, ll 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, ll 52-56: initiate stream server recovery; col 53, l 65 - col 54, l 20: client may specify a parameter which defines how to perform failover; (FAILOVER_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, l 64 - col 56, l 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state; safety duration is defined for this Office Action as time period waiting for response from client after message sent to client)

It would have been obvious to one of ordinary skill in the art to modify Chen for said alarm state when any of said state signals is not received after a safety duration following an expected periodic time for receiving said state signal and said safety duration as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Regarding Claim 12, Chen discloses data transmitting device according to claim 10, wherein said normal state signals received and data transmitting device comprises transfer means intended to send said messages to said data requesting device via said

Art Unit: 2443

first network. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

Chen does not explicitly disclose alarm means to produce a warning message when any of said state signals is not received in due time.

However, Forecast disclose wherein said alarm means for producing a warning message when any of said state signals is not received in due time, a transfer means to send said warning message, and said alarm means triggers said alarm state only when a complementary duration has elapsed after the sending of said warning message.

(Forecast col 52, ll 40-46: stream server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code; col 52, ll 52-56: initiate stream server recovery; col 53, l 65 - col 54, l 20: client may specify a parameter which defines how to perform failover;

(FAILOVER_SIGNALCLIENT: client will be signaled (warning message)) to request if failover should occur; col 55, l 64 - col 56, l 8: controller send a message (warning message) to client; master controller checks whether or not a time limit has been exceeded for a response from the client; if not alarm state)

It would have been obvious to one of ordinary skill in the art to modify Chen for alarm means to produce a warning message when any of said state signals is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network

Art Unit: 2443

clients. (Forecast col 25, ll 3-7)

Regarding Claim 13, Chen discloses data transmitting device according to claim 9, wherein said receiving means receives resume control messages from said data requesting device, and said streaming means resumes said data streaming when said streaming has been paused and one of said resume control messages is received. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow)

Regarding Claim 14, Chen discloses data transmitting process via at least one first communication network comprising the following steps:

- a) receiving requests of determined data from at least one data requesting device via at least one second communication network, (Chen col 5, ll 59-67: send a command packet (specific request) for retrieval of requested data; col 5, ll 39-44: control channel serves to exchange control messages; data channel serves to transmit multimedia data from the server to client; data channel (first) and control channel (second) communications channels (networks))
- b) streaming said data to said data requesting device via said first network, (Chen col 5, ll 48-59: data receiver receives incoming data packets from the network; data receiver signals buffer manager to place data packets into the packet buffer;

Art Unit: 2443

output processor delivers data to multimedia application; data channel (first) and control channel (second) communications channels (networks)) and

- c) receiving from said data requesting device pause control messages, and pausing said data streaming when said pause control messages are received, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 47-49: client agent sends NORMAL-TO-PAUSE command if amount increase above high water mark)
- d) receiving periodically normal state signals from said data requesting device, (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark; resume normal data flow) and
- e) triggering said normal state signals, said data transmitting process being executed by a data transmitting device compliant with claim 10. (Chen col 6, ll 9-15: three transmission modes (NORMAL, RUSH, PAUSE); col 6, ll 49-51: client agent sends PAUSE-TO-NORMAL command if amount of data decreases from above the high water mark)

Chen does not explicitly disclose triggering an alarm state when said state signal is not received in due time.

However, Forecast discloses wherein triggering an alarm state when said state signal is not received in due time. (Forecast col 52, ll 37-46: execution branches to step 534 if controller fails to receive a heartbeat from each stream servers within a certain timeout period (state signal or heartbeat not received in due time); stream

Art Unit: 2443

server sends the heartbeat (periodic transmission); heartbeat includes: the state of the stream (e.g. pause, playing, completed), and a failure type code indicating any failure; col 52, ll 52-59: branches to step 534: log the error and initiate stream server recovery state (alarm state))

It would have been obvious to one of ordinary skill in the art to modify Chen for triggering an alarm state when said state signal is not received in due time as taught by Forecast. One of ordinary skill in the art would have been motivated to employ the teachings of Forecast in order for throughput to be used efficiently and most of the throughput can be used for transmitting data to network clients. (Forecast col 25, ll 3-7)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2443

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung Hye Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L. Dollinger can be reached on (571) 272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kyung Hye Shin
Examiner
Art Unit 2443

KHS
October 30, 2009

/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443